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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,250	09/09/2003	Jaap Herman van't Hoff	7913-038-999	4047
<div>7590 04/26/2007</div> FISH & RICHARDSON, P.C. 1425 K Street, N.W. 11th Floor Washington, DC 20005-3500			EXAMINER RIVELL, JOHN A	
			ART UNIT 3753	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/26/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/657,250

Applicant(s)

VAN'T HOFF, JAAP HERMAN

Examiner

John Rivell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/31/07 (amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-14 and 17-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14 and 17-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments filed January 31, 2007 have been fully considered but they are not persuasive.

Claims 1-10, 15 and 16 have been canceled. Claims 11-14 and 17-26 remain pending.

The amendment filed August 8, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "Circumferential recess 22 has a trapezoidal cross-sectional shape in which two opposite sides (e.g., the two shortest sides) are not parallel."

The specification as originally filed, as well as the parental applications in their entirety (including the originally filed foreign application), fails to set forth with any written specificity any specific shape of recess 22 let alone "trapezoidal". Additionally, there is no written disclosure or discussion of shape having "two opposite sides (which) are not parallel" as is proposed in the amendment.

In response to this objection, applicant argues that:

"An applicant may show possession of an invention by disclosure of drawings or structural chemical formulas that are sufficiently detailed to show that applicant was in possession of the claimed invention as a whole. See, e.g., *Vas-Cath*, 935 F.2d at 1565, 19 USPQ2d at 118 ('drawings alone may provide a 'written description' of an invention as required by Sec. 112'); *In re Wolfensperger*, 302 F.2d 950, 133 USPQ 537 (CCPA 1962) (the drawings of applicant's specification provided sufficient written descriptive support for the claim limitation at issue); *Autogiro Co. of America v. United States*, 384 F.2d 391, 398, 155 USPQ 697, 703 (Ct. Cl. 1967) ('In those instances where a visual representation can flesh out words, drawings may be used in the same manner and with the same limitations as the specification.')

As noted by applicant in the above argument, the drawings as filed must be "sufficiently detailed to show that applicant was in possession of the claimed invention as a whole".

On close inspection of the drawings as filed it is speculative at best to conclude that the disclosed recess 22 is "trapezoidal" in shape such that the "two opposite sides are not parallel". There is no clear perception of a "trapezoidal" shape to the disclosed recess 22 and the drawings as filed are not of sufficient clarity to conclude such.

Applicant is required to cancel the new matter in the reply to this Office Action.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 12 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the application, as originally filed, (as well as in all parental applications) the written specification fails to identify and discuss any structural features and/or criticality of the now claimed "circumferential recess... has a trapezoidal rectangular cross-section" as recited in claim 12 and "wherein two opposite sides of the trapezoidal cross-section are not parallel to one another" as now recited in claim 26. From a thorough review the "trapezoidal" shape having "two opposite sides... not parallel to one another" is new matter.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-14, 17, 19-21, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alfons in view of Cruysbergs.

The patent to Alfons discloses, in figures 1-5 for example, a "pressure control device (generally at 3) for maintaining a constant predetermined excess pressure in a fluid dispensing container (1), which device (3) comprises a first chamber (4), a fluid connection (via valve 7, chamber 11 and port 12) between the first chamber (4) and the container (1), wherein the fluid connection comprises a first opening (e.g. the opening in the lower surface of wall 6 defining an upper sidewall in the lower chamber 4) in the sidewall (6) of the first chamber, a valve (7) with a closing member (at stem 10) for releasing and closing said fluid connection and a resilient pressure element (gas pressure chamber 5) exerting said predetermined excess pressure onto the closing member in a closing direction, the resilient pressure element comprising a second chamber (5; defined as the entire chamber encompassed by the upper end of container 3 to the upper surface of wall 6) being filled with a gas at the predetermined excess pressure and relative to which the closing member is movable, the second chamber (as defined above) is provided with a second opening (read at the lower otherwise open end of the cylinder enclosing space 5), the closing member (stem 10) extending from the first chamber (4) through the first and second opening (on opposite sides of wall 6) to the second chamber (above wall 6), a first subsurface (the lower surface of stem 10) of the closing member being situated in the first chamber (4) and a second subsurface (the lower surface of diaphragm 9) of the closing member being situated in the second

chamber (5 as defined above), the first chamber (4) being filled with a gas at a pressure higher than said predetermined excess pressure (in chamber 5), the size of the first subsurface (e.g. the end of stem 10 extending within the first chamber 4) is substantially smaller than the size of the second subsurface (the lower surface of diaphragm 9 spanning chamber 5), such that the gas pressure in the first chamber (4) results in that the force on the first subsurface (the end of the stem 10 extending within and therefore subject to fluid pressure within first chamber 4) is smaller than the force on the second subsurface (the lower surface of diaphragm 9) resulting from the predetermined excess pressure (within chamber 5), while in use the first opening (at valve 7) is released if the fluid pressure in the container (1) drops below the predetermined excess pressure (in chamber 5), so that gas flows from the first chamber (4) to the container (1) and the pressure in the container (1) increases until the first opening (at valve 7) is closed again by the closing member as a result of the increased pressure in the container (1 acting on diaphragm 9), wherein the second chamber (5) consists of a cylinder (e.g. the external wall(s) of the element 3 enclosing the space 5) which is close at a first (upper) end and of which a second (lower) end constitutes said second opening, and the closing member comprises a (diaphragm 9 and stem 10) movable in the axial direction of the cylinder so as to change the volume of the second chamber (5), and wherein the closing member (at valve 7, stem 10 and diaphragm 9) is movable in a reciprocated manner between an upper extreme position (fig. 5; wherein the seal 18 contacts the surface of stem 10 at an upper end of groove 17) and a lower extreme position (fig. 3; wherein the seal 18 contacts the surface of stem 10 at a lower end of groove 17), whereby the fluid connection (at valve 7) is closed, which extreme positions are defined by the width of a circumferential recess (i.e. the axial length distance between the upper position where the seal contacts the surface of stem 10 at the upper end of groove 17 to the lower

position where the seal contacts the surface of stem 10 at the lower end of groove 17 defines a "width" of the "recess" claimed) in the valve (stem) and the release (open) position of the closing member is defined between the upper and lower closing positions" as recited in claim 11.

Thus the patent to Alfons discloses all the claimed features with the exception of having a "plunger" e.g. a reciprocating piston element, moving within the cylinder enclosing space 5, "sealed by an outer sealing ring (claim 17).

The patent to Cruysbergs ('207) in the embodiment of figure 8 discloses that it is known in the art to employ a piston element at plunger 146 including seals 148 fixed to the piston for sealing the piston to the cylinder formed by the chamber 136 wall for the purpose of providing a fluid pressure reaction surface on which fluid pressure acts to actuate the valve element at stem 144 controlling fluid pressure flow from the first chamber 140 to the second chamber 152 and ultimately to the container for dispensing of the material within the container 16. In comparison, the diaphragm used in Alfons is not subject to fluid leakage there across and is more sensitive to fluid pressure differentials there across yet is susceptible to rupture at higher pressures whereas a piston element, not subject to rupture at higher pressures, is not as sensitive to pressure differentials due to friction between the seal and the cylinder wall and is subject to leakage across the piston at the seals. On comparison, each of the piston and diaphragm elements is regarded as a full functional equivalent of the other and are not functionally mutually exclusive.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Alfons a piston element, in place of the diaphragm element 9, responsive to fluid pressure differentials there across for the purpose of utilizing a fluid pressure reaction surface not subject to rupture on which fluid

pressure acts to actuate the valve element at stem 10 controlling fluid pressure flow from the first chamber 4 to the second chamber 5 and ultimately to the container at 23 for dispensing of the material within the container 3 as recognized by Cruysbergs ('207).

Regarding claims 12 and 26, Alfons, as modified above, discloses the claimed invention except for having a "trapezoidal" shaped cross sectional recess in the stem 10, whose "two opposite sides... are not parallel to one another."

Firstly, it would have been an obvious matter of design choice to employ a "trapezoidal" shaped recess, whose "two opposite sides... are not parallel to one another" in place of the shape of the "recess" defined between the upper and lower extreme positions of the valve stem of Alfons, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. In re Dailey, 357 F.2d 669, 149 USPQ 457 (CCPA 1966).

Secondly, if it were not an obvious matter of design choice relating to shape, the patent to Cruysbergs ('207), in the embodiment of figure 8 for example, discloses that it is known in the art to employ a "trapezoidal" shaped groove 144b (see column 9, lines 34-39; here it is clear from the groove 144b shown in figure 8 that the two opposite sides of the groove 144b are "not parallel" and are thus "trapezoidal") whose "two opposite sides... are not parallel to one another" in the reciprocal valve stem 144 for the purpose of controlling the flow of charging fluid pressure from a "first chamber" 140 to the "second chamber" 152 and ultimately to the interior of container 16 for dispensing of material contained within container 16. As compared to the "shape" of the recess of Alfons, the difference in shapes is seen as a fully mechanical and/or functional equivalent.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Alfons a specifically "trapezoidal" shaped recess whose "two opposite sides... are not parallel to one another" in place of the recess of Alfons for the purpose of controlling the flow of pressurized fluid from the first chamber to ultimately the container so as to allow material dispensing from the container as recognized by Cruysbergs ('207).

Regarding claim 13, in Alfons, "at the upper (fig. 5) and lower (fig. 3) extreme positions, a gas seal is formed by contact between a sealing ring (18) and an outer edge of the closing member" at opposing ends of groove 17, as recited.

Regarding claim 14, in Alfons, "the closing member comprises a stem (10) with the circumferential recess (at groove 17)" as recited.

Regarding claim 19, in Alfons, "the second chamber (5) is located outside the first chamber (4)" as recited.

Regarding claim 20, in Alfons, "the closing member (at valve 7) is located substantially outside the first chamber (4)" as recited.

Regarding claim 21, in Alfons, "the volume of the first chamber (4) is substantially greater than the volume of the second chamber (5)" as recited.

Regarding claim 25, in Alfons, "a container (at container 1 is) provided with a device according to claim 1" as recited.

Regarding applicants remarks concerning the above, the allegation that:

"there is no disclosure or suggestion in either Alfons or Cruysbergs to use a plunger in place of Alfons' membrane"

is not well taken.

The patent to Cruysbergs discloses, in the embodiment of figure 8, that it is known in the art to employ a piston element at plunger 146 including seals 148 fixed to

the piston for sealing the piston to the cylinder formed by the chamber 136 wall for the purpose of providing a fluid pressure reaction surface on which fluid pressure acts to actuate the valve element at stem 144 controlling fluid pressure flow from the first chamber 140 to the second chamber 152 and ultimately to the container for dispensing of the material within the container 16. The piston element 148 closes off a chamber 150 containing a reference pressure. The pressure differential between chambers 150 and 152 functions to control dispensation of fluid from chamber 140 to the inside of container 16 for ultimate dispensation of fluid material in container 16. These elements function in the same manner in the same environment as those of the claims at issue. As noted above, the specific functional differences between a diaphragm verses a piston as the valve operator, evolve as a result desired operating conditions. That is, where a diaphragm element will not suffer leakage of fluid across the diaphragm and is more sensitive in its movement responsive to fluid pressure differentials because of no friction to overcome, a piston/cylinder arrangement will permit minor leakage at the sealing surfaces due to the relative movement therebetween and is not as sensitive to fluid pressure differentials because of the friction between the seals and the cylinder wall. Given the functional equivalence of a diaphragm valve operator, as in Alfons, verses a piston/cylinder operator as in Cruysberghs, the structures are interchangeable as desired.

Secondly, the further argument that:

“if... Alfons' pressure capsule was modified to include Cruysberghs' plunger 146, the resulting combination still would not provide the subject matter of amended claim 11 (in that) Cruysberghs' plunger 146 does not have such a (circumferential) recess (because) Cruysberghs does nor form a **circumferential** (emphasis in original) recess”

is not well taken.

The patent to Cruysbergs is not relied on to demonstrate a known "circumferential" recess. The recess of Alfons is "circumferential". Cruysbergs is relied on to demonstrate that it is known to employ a trapezoidal shape of the valve aperture used to control the flow of fluid in this art. The above rejection proposes to modify the device of Alfons to include a "trapezoid" shape to the already circumferential recess of Alfons.

Thirdly, concerning applicants further comments purporting that the proposed combination "would not even be "possible", the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Here it is considered that the teachings of Cruysbergs, clearly suggest to one of ordinary skill in the art the use of, and relative to the use of a diaphragm as in Alfons, the interchangeability of a piston/cylinder valve operator verses a diaphragm valve operator.

Additionally, even if one were to physically relocate a piston/cylinder arrangement in the device of Alfons, the arguments concerning potential misalignment of the valve rod appear to be in error. For example, in a substitution of a piston/cylinder operator as in Cruysbergs, in place of the diaphragm operator of Alfons, one need merely replace the operator. As modified, the piston would reciprocate within the chamber 5 of Alfons. The valve rod at 10 of Alfons would be connected to the bottom of

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the proposed piston. As the piston is strictly guided axially by the cylinder, the rod would also be so axially guided.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 18 and 22-24 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,616,017. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the claimed features of instant application claims 18 and 22-24 are contained in one, or more, of claims 1-10 of U.S. Patent No. 6,616,017.

In response to applicants filing of a terminal disclaimer to obviate the above double patenting rejection, the terminal disclaimer filed on January 31, 2007 disclaiming the terminal portion of any patent granted on this application which would extend

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beyond the expiration date of U. S. Pat. No. 6,616,017 has been reviewed and is NOT accepted.

The person who signed the terminal disclaimer is not recognized as an officer of the assignee, and he/she has not been established as being authorized to act on behalf of the assignee. See MPEP § 324.

An attorney or agent, not of record, is not authorized to sign a terminal disclaimer in the capacity as an attorney or agent acting in a representative capacity as provided by 37 CFR 1.34 (a). See 37 CFR 1.321(b) and/or (c). The signor of the terminal disclaimer, Mr. Sean P. Daley, is not of record in this application.

It would be acceptable for a person, other than a recognized officer, to sign a terminal disclaimer, provided the record for the application includes a statement that the person is empowered to sign terminal disclaimers and/or act on behalf of the organization.

Accordingly, a new terminal disclaimer which includes the above empowerment statement will be considered to be signed by an appropriate official of the assignee. A separately filed paper referencing the previously filed terminal disclaimer and containing a proper empowerment statement would also be acceptable.

It should be noted that applicant is not required to pay another disclaimer fee as set forth in 37 CFR 1.20(d) when submitting a replacement or supplemental terminal disclaimer.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel can be reached on (571) 272-4929. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John Rivell
Primary Examiner
Art Unit 3753

j.r.